

**To:** Ostrander, David [Ostrander.David@epa.gov]  
**Cc:** Administrator/Ex. 6 Burke,  
Thomas [Burke.Thomas@epa.gov]; Stanislaus, Mathy [Stanislaus.Mathy@epa.gov]; Fritz,  
Matthew [Fritz.Matthew@epa.gov]; Reynolds, Thomas [Reynolds.Thomas@epa.gov]  
**From:** McGrath, Shaun  
**Sent:** Thur 8/13/2015 4:35:02 AM  
**Subject:** Re: Conference call - 9:15 PM mountain time

## Interpretation of Water Metal Concentrations

EPA initiated a sampling effort on Aug. 5, 2015, to assess the impacts of the blowout at the Gold King Mine near Silverton, Colo. Surface water and sediment samples were collected at intervals beginning on Aug. 5, 2015. At a number of sampling locations, samples have been taken before the contaminant plume reached a sample location and can be used to characterize baseline metals concentrations, to identify the arrival of the plume and monitor the return of river concentrations to baseline conditions. Surface water samples have been analyzed for 24 metals, which include arsenic, cadmium, lead, mercury and others. Those sampling efforts are ongoing. The data represent validated results of samples collected from Aug. 5 to Aug. 9, 2015. Although sediment sampling has also commenced, at this time the data analysis and validation are not complete and, therefore, the results will not be presented.

The determination of lingering impacts to the river is based upon a comparison of detected metal concentrations after the plume passed a sampling location with site-specific background concentrations. Background values were defined for the Animas River from the Silverton, Colo. area to the Durango municipal water intake.

Any detection that exceeded background levels was compared with screening criteria for recreational water use. In addition, they were compared to Colorado's criteria for agricultural use, including both ingestion by livestock and irrigation uses.

## Cement Creek and Animas River from Silverton to the Southern Colorado Boarder

Surface water quality samples were collected from nine locations in Colorado. Two of these were from Cement Creek and seven were from the Animas River. These locations were selected because an historical dataset already exists for these locations. Therefore, they will serve as good indicators of conditions before, during and after the event.

The graphs identify trends in concentrations of some of these metals that have been detected historically in both Cement Creek and the Animas River. Each graph shows the trends in those concentrations between Aug. 5 and Aug. 9, 2015. Historical concentrations are not available for the 32nd Street Bridge location. The blowout occurred late in the morning on Aug. 5, 2015. The contaminant plume moved downstream at approximately four miles per hour. The trends over time and location represent the movement of the contamination of the water in the Animas River and show the recovery of the river at those same locations.

The comparison of river metal concentrations after the plume has moved past these sampling points to pre-event conditions demonstrated that water quality returned to pre-event

conditions. Samples were evaluated using two criteria: first the concentrations of each analogs were compared to pre-event levels measured prior to the discharge passing the monitoring location. This provided a background or baseline level and provides a way to determine when there is not incremental impact from the spill. Second, the levels were compared to health based screening levels developed to assure that potential exposures from the water do not exceed levels of concern. At this time, the sediment has not been fully analyzed nor have the data been validated.

Sent from my iPhone

On Aug 12, 2015, at 9:05 PM, Ostrander, David <[Ostrander.David@epa.gov](mailto:Ostrander.David@epa.gov)> wrote:

Call In: (866) 299-3188

Code: (214) 665-7356

-----Original Message-----

From: **Administrator/Ex. 6**

Sent: Wednesday, August 12, 2015 8:51 PM

To: Burke, Thomas; Stanislaus, Mathy; Fritz, Matthew; Ostrander, David; McGrath, Shaun

Cc: Reynolds, Thomas

Subject: Conference call

If we do not have an agreement on a statement to accompany the WQ data release for the upper Animas within the next 30 minutes I would suggest that we pull together a conference call. I know people are working hard but EPA's credibility is at stake if we cannot deliver this. And I think EPA knows how to frame the science statement in a way that simply states how the data related to pre-incident levels and to screening levels for the key uses. Lee can do that without having to recommend anything so decision makers are free to make their own calls. That is actually our job here.

I can connect through the Farmington response center.

Dave - can you pull the call together 30 minutes from now?

Sent from my iPhone